KOSTYANOV, A., inzhener.

Automatic machine for cutting brick clay. Stroi.mat.,izdel.i konstr. 2 no.6:22-23 Je '56. (MLRA 9:8)
(Brickmaking machinery)

BARDYSHEV, I.I.; SKRIGAN, A.I.; ROMAN, L.V.; KOST'YANOVA, S.S.

Chemical composition of dry-distilled turpentine obtained from pine stumps which remained in peat deposits for a thousand years. Zhur. prikl. khim. 34 no.2:440-445 F '61. (MIRA 14:2)

1. Belorusskiy lesotekhnicheskiy institut imeni S.M.Kirova i Institut fiziko-organicheskoy khimii AN BSSR.
(Turpentine)

KOSTYANOVSKAYA, N.M.

32-2-50/60

AUTHORS: Kostyanovskaya, N. M. , Babayev, M. V.

TITLE: The Determination of Copper, Bismuth, Tin, Antimony, Arsenic and Lead in Ferrotungsten (Opredeleniye medi, vismuta, olova, sur'my, mysh'yaka i svintsa v ferrovol'frame)

PERIODICAL: Zavodskaya Laboratoriya,1956,Vol.24, Nr 2, pp.254-255(USSR)

ABSTRACT: More expedite methods of the determination of the elements mentioned in the title are applied in the Laboratory of the Institute for Ferrous Alloys in Chelyabin. The exact course of analysis of every method of determination is given, according to which copper is determined idiometrically, tin by means of the usual iodide method with an accuracy of ± 0,01 %, arsenic by means of the method of Gutneit, bismuth by means of tin chloride and calium iodide by color comparison with a standard sample containing a specified amount of bismuth, antimony colorimetrically, where stress is laid upon the sequence of the addition of reaction components, and lead by color comparison with a standard sample containing molybdenum. All these determination methods were already described

Card 1/2

32-2-58/60

The Determination of Copper, Bismuth, Tin, Antimony, Arsenic and Lead in Ferrotungsten

by S. Yu. Faynberg (reference 1). There is 1 reference, which is Slavic.

ASSOCIATION: Chelyabinsk Ferroalloys Works (Chelyabinskiy zavod ferrosplavov)

AVAILABLE: Library of Congress

1. Copper-Determination 2. Bismuth-Determination 3. Tin-Determination 4. Antimony-Determination 5. Arsenic-Determination 6. Lead-Determination 7. Ferrotungsten-Contamination

Card 2/2

Card 2/2

AUTHORS: Babayev, M. V., Kostyanovskaya, N. M. SOV/32-24-10-5/70

TITLE: The Determination of the Phase Composition of the Cinders of Silicon Alloys (Ob opredelenii fazovogo sostava shlakov kremnistykh splavov)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 10, pp 1183-1184 (USSR)

ABSTRACT: The data on an ordinary chemical analysis are rather insufficient in characterizing the cinders of silicon alloys. The components of the phases must be known in order to gain an insight into the melting technology. In the laboratory of the works mentioned in the association a method was worked out for determining silicon carbide and silicon oxide (SiO) in cinders. The other ingredients of the cinders are determined according to usual methods. Exact descriptions of the course of the analysis are given for the silicon carbide determination, the determination of the elementary silicon, and of silicon oxide determination. A formula for calculating the silicon oxide- and elementary silicon content is given as well. In all determinations a weighed sample of 0,25 g of the fine-ground cinder was used.

Card 1/2

SOV/32-24-10-5/70

The Determination of the Phase Composition of the Cinders of Silicon Alloys

ASSOCIATION: Chelyabinskiy ferrosplavnyy zavod
(Chelyabinsk Ferro-Alloys Works)

Card 2/2

KOST'YANOVSKIY, I.A.; PRILUTSKIY, G.Ya.; SHTERN, M.A.; GORELIK, G.N.; REZKOVA, F.I.

Introducing a new method for the production of zinc oxide for needs of the paint and other branches of industry. A.K. Evdokimova, M.V.Potapov, A.K.Shakhnazarov. Remarks by I.A. Kostianovskii and others. Authors' response. TSvet.met. 35 no.12:69-72 D '62. (MIRA 16:2)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy nikelevoy promyshlennosti (for Kost'yanovskiy, Prilutskiy). 2. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut lakokrasochnoy promyshlennosti (for Shtern, Gorelik). 3. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy promyshlennosti tsvetnoy metallurgii (for Rezkova).
(Zinc oxide) (Evdokimova, A.K.)
(Potapov,M.V.) (Shakhnazarov,A.K.)

KOSTYANOVSKIY, R.G.; PROKOF'YEV, A.K.

Aminomethylstannanes. Izv. AN SSSR Ser. khim. no.1:175-178 '65.
Izv. AN SSSR Ser. khim. no.1:175-178 '65.
(MIRA 18:2)

1. Institut khimicheskoy fiziki AN SSSR.

17(1C)

SOV/20-127-5-53/58

AUTHORS: Yarmonenko, S. P., Kostyanovskiy, R. G.

TITLE: The Effect of Methyl-bis-(β-chloro Ethyl)-amine (HN2) on Frogs Under Hibernation Conditions

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 5, pp 1125-1127 (USSR)

ABSTRACT: The chloro ethyl amines, especially HN2 are typically radiomimetic substances (Refs 1,2). They reproduce distinctly the radiobiological effect (Refs 1-8). The analogy in the effect of the radiations and HN2 also concerns the preservatives against the damage caused by them (Ref 9), e.g. the radio preservatives of the mercamine type (Refs 10-14). All that proves the commonness of the concerning mechanisms in certain stages of the biological effect of the two mentioned factors. The authors assume that the radiobiological effect is caused not only by the short-lived radicals (HO_2, OH, H), but also by more stable intermediate products of the latter. Therefore, they say that HN2 imitates the effect of these intermediate products. In this connection it is important that the radiation- as well as the radiomimetic effect are based upon certain chemical reactions

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The Effect of Methyl-bis-(β-chloro Ethyl)-amine (HN2) on Frogs Under Hibernation Conditions

the rate of which is bound to depend on the temperature. The radiation disease of frogs (Refs 5-17), mice (Refs 18-21), rats (Refs 18,22), Spermophilus (Refs 23,24), and Myoxis (Refs 25-27) develops extremely slowly at 0-12°. The latent period and mortality characteristic of the concerning dose occur at room temperature (Refs 16,25). The data on the temperature dependence of the alkylating agents are very rare; thorough investigations of the effect on the entire organisms are not known to the authors. In the present paper the intoxication course with HN2 at low temperatures was compared with analogous data on the radiation damage (Ref 16). The experiments were carried out with 100 female and male grass frogs (Rana temporaria). The experimental frogs were kept 24 hours before the introduction of HN2 at 0-1°, the control animals put into a thermochamber (18-20°). Both groups had a biological control (20 intact frogs each of them, kept under analogous conditions). HN2 was introduced as aqueous hydrochloride solution in doses of 40, 60, and 200 mg/kg into the leg muscles of the experimental animals. The control animals died according to the above doses

The Effect of Methyl-bis-(β-chloro Ethyl)-amine (HN2) on Frogs Under Hibernation Conditions

within the following days: 5-12, 1-3 days, 3-6 hours respectively; or 30 days (animals did not die), 5-12, 3-4 days respectively at low temperature. The frogs treated with 40 mg/kg HN2 showed under the control conditions (18-20°) after 2 days the symptoms of the radiation disease and died after 3-6 days. Figure 1 shows the dynamics of the dying. No satisfactory explanation exists for the time being for the deceleration of the radiation disease by low temperatures. Most of the research workers assumed a deceleration of the metabolism processes. The authors consider the mentioned phenomenon to be unequivocally clarified: the initially mentioned intermediate products react practically instantaneously with the biosubstrate at usual temperatures. The results obtained agree well with several experimental facts(Refs 16,25,30).There are 2 figures and 30 references, 7 of which are Soviet.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences, USSR)

17 (10,12)

AUTHORS: Kostyanovskiy, R. G., Yarmonenko, S. P. SOV/20-127-6-42/51

TITLE: A Comparative Analysis of the Biological Effect of Ionizing Radiation and of Methyl-bis-(β-chloroethyl)-amine (HN2) Within a Large Range of Doses

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 6, pp 1294 - 1296 (USSR)

ABSTRACT: There is a characteristic dependence of the lifetime of mammals on the irradiation dose (Refs 1,2). Rayewskiy et al distinguish 5 ranges of doses which, in their opinion, reflect independent detrimental mechanisms: they cause the death of test animals (100-1200; 1200-15,000; 15,000-30,000; 30,000-100,000; >100,000 r). In the second of these ranges, the lifetime is independent of the dose, and is 3-5 days on an average. The lifetime is rapidly reduced with an increase in the dose, and at 100,000 r death occurs during irradiation. From 30,000 r onward, spasms and other symptoms of a detrimental effect on the central nervous system occur. At doses of 20,000-50,000 r, an independent detrimental mechanism - the damage of the nerve centers - is said to act in contrast to the "peripheral" or "reflex" mechanism, the latter occurring with smaller doses (Refs 3,4).

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A Comparative Analysis of the Biological Effect of Ionizing Radiation and of Methyl-bis-(β-chloroethyl)-amine (HN2) Within a Large Range of Doses

SOV/20-127-6-42/51

In connection with the deliberations previously expressed (Ref 5) by the authors concerning the utility of radiomimetic representation of radiobiological effects, they investigated the detrimental effects by doses of from 1 to 2,000 mg/kg of HN2 administered intraperitoneally to 568 white mice in the form of an aqueous hydrochloride solution (0.1-0.5 ml). Figure 1 shows the dependence of the average lifetime on the HN2-dose as a logarithmic curve, as compared to the Rajewskiy-curve (Ref 1). Both curves coincide at one point which corresponds to the minimum, absolutely lethal, doses (750 r and 4 mg/kg). Already a casual comparison of these two curves excludes any doubt about the close relationship of the phenomena represented by them. The blood investigation showed that in the case of HN2-doses lying on the horizontal part of the curve, death occurs in connection with an extensive suppression of blood formation (Table 1). This agrees with the results obtained during the "acutest" form of radiation disease (L. F. Semenov, Ref 3). Besides the above analogies in the character of the two curves, also very interesting differences are found. In

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spite of these differences, the principal similarity of the two said dependences cannot be denied. Even if the complicacy of the pathological process caused by the HN2-intoxication is considered, 2 leading detrimental mechanisms can be distinguished which bring about the death: a) In the range of the horizontal part of the curve, the detrimental effect on the rapidly dividing tissues, particularly the blood-forming ones, seems to be decisive; b) In the interspaces b and v, the animals die at symptoms of a detrimental effect to the central nervous system. The 5 interspaces by Rayevskiy only reflect 2 mechanisms of the radiation death. The two mechanisms must, however, not be opposed to each other. There are 1 figure, 1 table, and 7 references, 4 of which are Soviet.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences, USSR)

PRESENTED: April 6, 1959, by N. N. Semenov, Academician

SUBMITTED: March 31, 1959

ZHERNEBCHENKO, P.G.; GOLOVCHINSKAYA, Ye.S.; KOSTYANOVSKIY, R.G.; KRASNYKH, I.G.; KUZNETS, Ye.I.; MAGIDSON, O.Yu.; MURASHOVA, V.S.; PASTUKHOVA, I.S.; PREOBRAZHENSKAYA, M.N.; SUVOROV, N.N.; TER-VARTANYAN, L.S.; ZHKHIVADZE, K.A.; SHASHKOV, V.S.; SHCHUKINA, M.N.

Role of oxidative deamination in the mechanism of radiation protection afforded by some amines. Zhur.ob.biol. 21 no.2: 157-160 Mr-Ap '60. (MIRA 13:6)

(RADIATION PROTECTION) (DEAMINATION)

AUTHORS: Rapoport, I. A., Kostyanovskiy, R. G. S/020/60/131/01/053/060
B011/B009

TITLE: The Mutation Activity of Some Inhibitors of Cholinesterase

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 1, pp 191 - 194 (USSR)

ABSTRACT: In the present paper the authors report on their experiments with the isopropyl ester of methylphosphinic acid fluoride (IMPhF). They succeeded in causing hereditary changes in the common fruit fly Drosophila melanogaster (24-48 hour-old larvae as well as full-grown flies) by means of this substance. The insects were exposed to IMPhF vapor after an equilibrium concentration of this substance had been reached in the vessel. In the first experiment series the concentration was 12 mg/l, in the second series 8.5 mg/l. The insects were exposed to the vapor for 3-25 minutes. In the second series a second treatment was carried out. The effect of IMPhF was analyzed with regard to the incidence of mutations according to sex. For this purpose the strain y^{3P} of the common fruit fly, which had been used in several earlier experiments, was used. The male insects of this strain were crossed with females of the strain Bcl/white. Table 1 gives the results. The comparison of the re-

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sulting lethal mutations with the incidence of spontaneous mutation in the sex chromosome (1 : 700 + 1 : 1000) shows that IMPhF is able to increase the incidence of hereditary shifts approximately to the hundredfold. Its effect probably surpasses that of short-wave irradiation. Thus this new transgenation factor is of great interest for industrial (antibiotics production) and agricultural selection. The authors go on to quote exclusively western biochemical papers (Refs 10-24) to cast light on some aspects of the mechanism of intervention of IMPhF into the autocatalysis. These data are of interest particularly in connection with the high cholinesterase content of the cell nuclei (Ref 10). All the data cited permit the assumption that a direct phosphorylation is responsible for the mutagenesis of the chromosome substrate, above all the protein part of the gene. Most probably the substances in question are the amino acids serine and tyrosine. This latter possibility may prove to be the source of a certain specificity of the mutagenic effect. There are 1 table and 24 references, 2 of which are Soviet.

The Mutation Activity of Some Inhibitors of Cholinesterase

S/020/60/131/01/053/060
B011/B009

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences, USSR)

PRESENTED: September 28, 1959, by N. N. Semenov, Academician

SUBMITTED: September 17, 1959

Card 3/3

KOSTYANOVSKIY, R.G.

Reaction of ethylenimine with formaldehyde. Dokl. AN SSSR 135 no.4:853-856 '60. (MIRA 13:11)

1. Predstavleno akademikom I.L.Knunyantsem.
(Ethylenimine) (Formaldehyde)

KOSTYANOVSKIY, R.G.

Anionotropic rearrangement during the reaction of β-chloropropionic acid with phosphoric anhydride. Zhur. ob. khim. 31 no.4:1402 Ap '61. (MIRA 14:4)

(Propionic acid) (Phosphorous oxide)

KOSTYANOVSKIY, R.G.

Reaction of ethylenimine with carbonyl compounds. Dokl. AN SSSR 139 no. 4:877-879 Ag '61. (MIRA 14:7)

1. Predstavleno akademikom I.L. Knunyantsem.
(Ethylenimine) (Carbonyl compounds)

KOSTYANOVSKIY, R.G.; PAN'SHIN, O.A.; BYSTROV, V.F.

Reaction of N-ethylene iminomethylation. Izv. AN SSSR. Otd.khim. nauk no.5:931 My '62. (MIRA 15:6)

1. Institut khimicheskoy fiziki AN SSSR.
(Ethylene) (Methylation)

KOSTYANOVSKIY, R.G.; BYSTROV, V.F.

Dual-character reactivity of N-ethyleneiminocarbinol. Izv.AN SSSR.Otd.khim.nauk no.8:1488-1491 Ag '62. (MIRA 15:8)

1. Institut khimicheskoy fiziki AN SSSR.
(Methanol) (Imines)

KOSTYANOVSKIY, R.G.; YUZHAKOVA, O.A.; BYSTROV, V.F.

Reactions of ethyleniminocarbinos with diazo compounds. Izv.AN SSSR. Otd.khim.nauk no.9:1666-1669 S '62. (MIRA 15:10)

1. Institut khimicheskoy fiziki AN SSSR.
(Methanol) (Diazo compounds)

KOSTYANOVSKIY, R.G.; YUZHAKOVA, O.A.

N-ethylenimination of primary amines. Zhur.ob.khim. 32 no.8:2743-2744 Ag '62. (MIRA 15:9)

1. Institut khimicheskoy fiziki AN SSSR.
(Amines) (Ethylenimine)

BYSTROV, V. F.; YUZHAKOVA, O. A.; KOSTYANOVSKIY, R. G.

Gammet constants of the ethylenimine cycle. Dokl. AN SSSR 147 no.4:843-845 D '62. (MIRA 16:1)

1. Institut khimicheskoy fiziki AN SSSR. Predstavleno akademikom V. N. Kondrat'yevym.

(Ethylenimine) (Heterocyclic compounds)

KOSTYANOVSKIY, R. G.; PAN'SHIN, O. A.

N-piperidinecarbinol. Izv. AN SSSR. Otd. khim. nauk no.1: 182-186 '63. (MIRA 16:1)

1. Institut khimicheskoy fiziki AN SSSR.

(Piperidinemethanol)

KOSTYANOVSKIY, R. G.; BYSTROV, V. F.

α-Aryl-N-ethyleniminocarbinols. Izv. AN SSSR. Otd. khim. nauk no.1:171-173 '63. (MIRA 16:1)

1. Institut khimicheskoy fiziki AN SSSR.
(Ethylenimine) (Carbonyl compounds)

KOSTYANOVSKIY, R.G.; BYSTROV, V.F.

Structure and dual reactivity of N-ethyleneiminocarbinols.
Dokl.AN SSSR 148 no.4:839-842 F '63. (MIRA 16:4)

1. Institut khimicheskoy fiziki AN SSSR. Predstavleno akademikom V.N.Kondrat'yevym.

(Methanol) (Chemical structure)

L 41407-65 EWG(j)/EWT(m) GS

ACCESSION NR: AT 5003262 S/0000/64/000/000/0066/0100

AUTHOR: Yarmonenko, S. P.; Shashkov, V. S.; Kostyanovskiy, R. G.

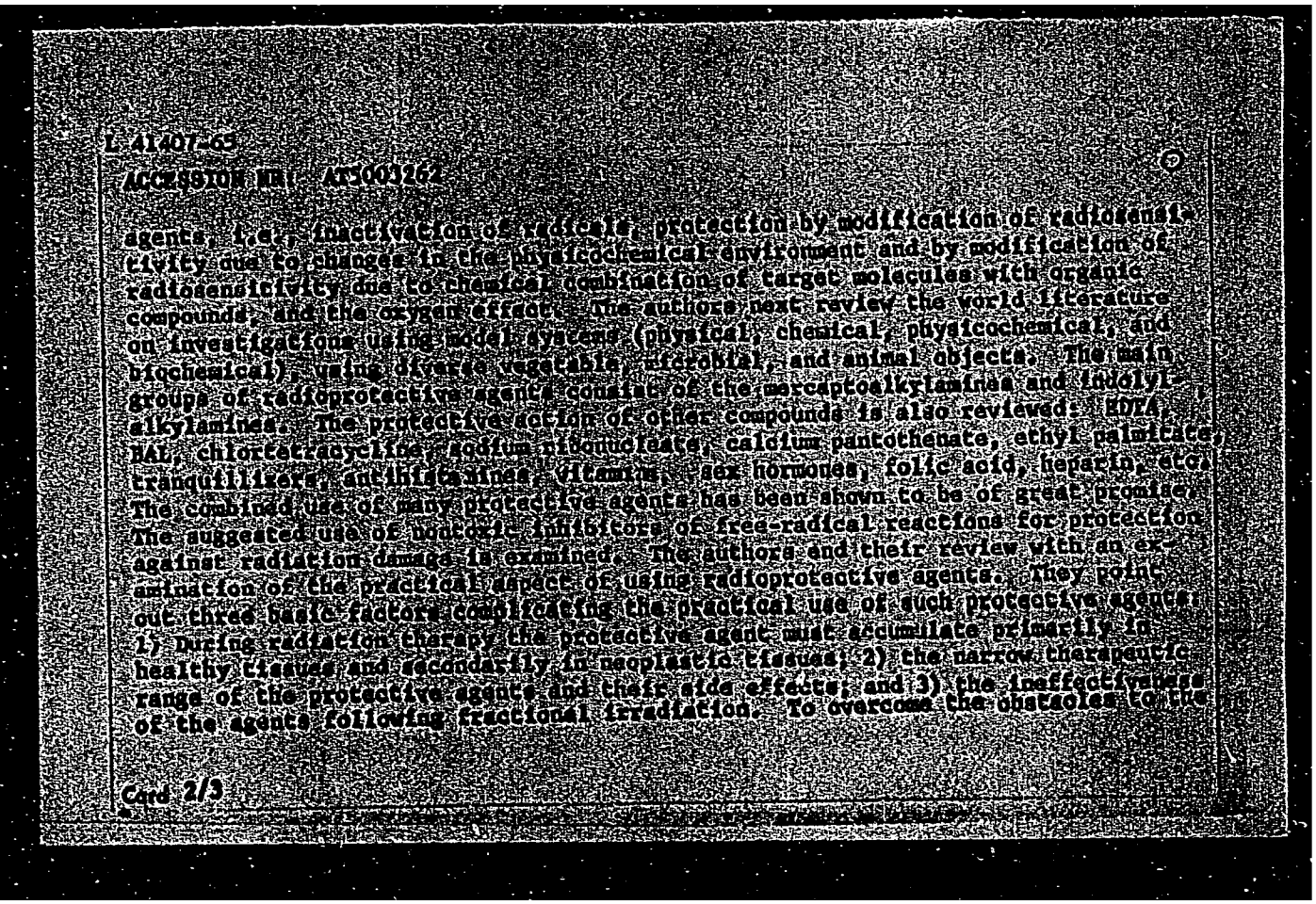
TITLE: Chemical means of preventing radiation damage

SOURCE: AN SSSR. Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii. Vliyaniye ioniziruyushchikh izlucheniy na organizm. Problemy transplantatsii i regeneratsii 1962 (Effect of ionizing radiation on organisms. Problems of transplanting and regeneration, 1962). Moscow, 1964, 66-100

TOPIC TAGS: radiation damage, chemical radiation protection, oxygen effect, radioprotective agent, chromosomal aberration, free radical, antiradiation drug

ABSTRACT: The authors attempt to analyze the experimental work carried out in recent years in the Soviet Union and abroad in model radiation experiments at the molecular and cellular level and on intact organisms and to relate the results to the possibility of using chemical agents in the protection of man against radiation. Antiradiation agents are classified in relation to three aspects: their chemical characteristics, pharmacological properties, and protective action; the last one, the mechanism of action, is preferred by the authors. A review is given of the contemporary opinions as to the mechanism of action of radioprotective

Card 1/3

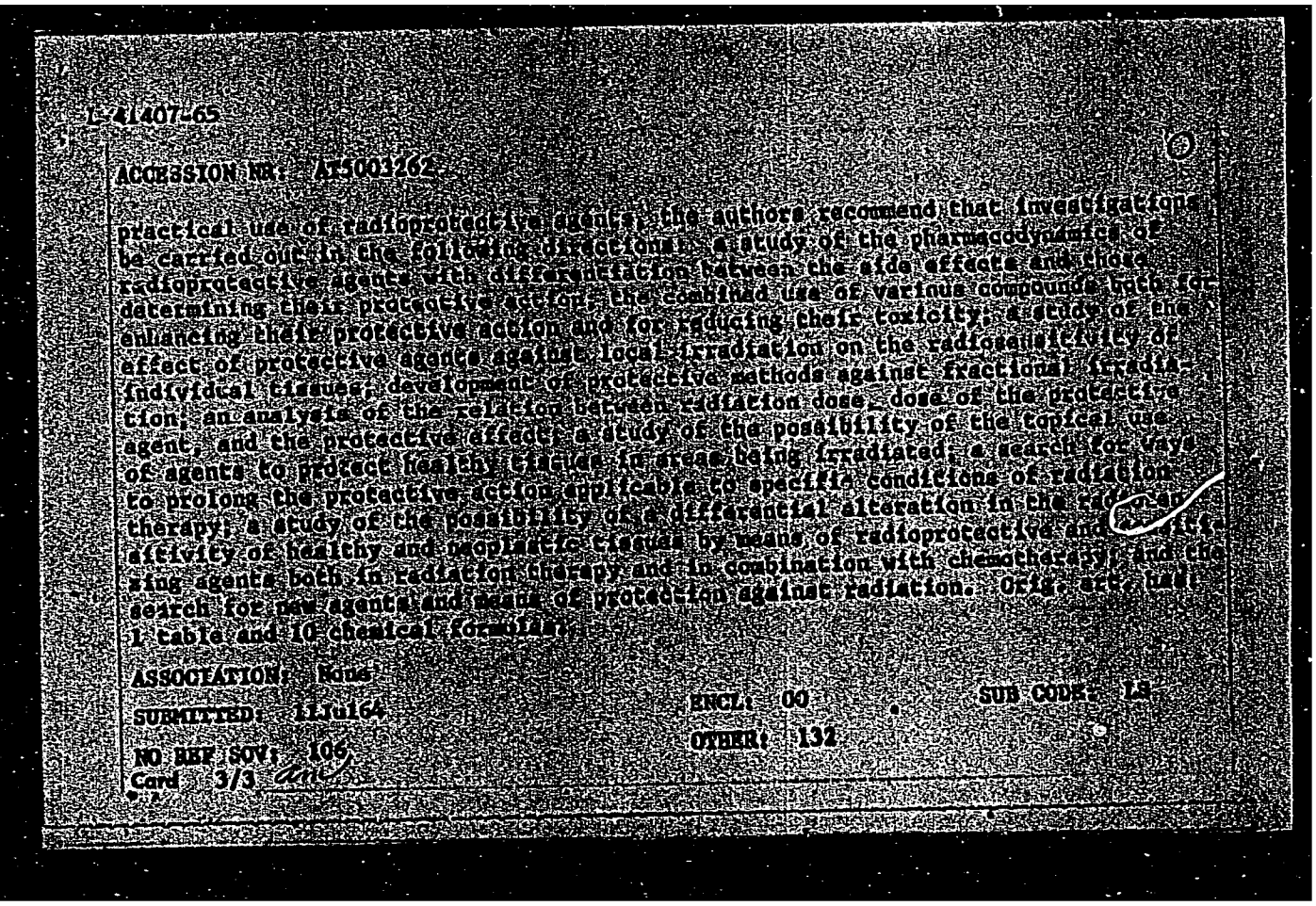


L 41407-65

ACCESSION NR: AT5001262

agents, i.e., inactivation of radicals, protection by modification of radiosensitivity due to changes in the physicochemical environment and by modification of radiosensitivity due to chemical combination of target molecules with organic compounds, and the oxygen effect. The authors next review the world literature on investigations using model systems (physical, chemical, physicochemical, and biochemical), using diverse vegetable, microbial, and animal objects. The main groups of radioprotective agents consist of the mercaptoalkylamines and indolylalkylamines. The protective action of other compounds is also reviewed: EDTA, BAL, chlortetracycline, sodium ribonucleate, calcium pantothenate, ethyl palmitate, tranquilizers, antihistamines, vitamins, sex hormones, folic acid, heparin, etc. The combined use of many protective agents has been shown to be of great promise. The suggested use of nontoxic inhibitors of free-radical reactions for protection against radiation damage is examined. The authors end their review with an examination of the practical aspect of using radioprotective agents. They point out three basic factors complicating the practical use of such protective agents: 1) During radiation therapy the protective agent must accumulate primarily in healthy tissues and secondarily in neoplastic tissues; 2) the narrow therapeutic range of the protective agents and their side effects; and 3) the ineffectiveness of the agents following fractional irradiation. To overcome the obstacles to the

Card 2/3



L 41407-65

ACCESSION NR: AT5003262

practical use of radioprotective agents, the authors recommend that investigations be carried out in the following directions: a study of the pharmacodynamics of radioprotective agents with differentiation between the side effects and those determining their protective action, the combined use of various compounds both for enhancing their protective action and for reducing their toxicity; a study of the effect of protective agents against local irradiation on the radiosensitivity of individual tissues; development of protective methods against fractional irradiation; an analysis of the relation between radiation dose, dose of the protective agent, and the protective effect; a study of the possibility of the topical use of agents to protect healthy tissues in areas being irradiated; a search for ways to prolong the protective action applicable to specific conditions of radiation therapy; a study of the possibility of a differential alteration in the radiosensitivity of healthy and neoplastic tissues by means of radioprotective and sensitizing agents both in radiation therapy and in combination with chemotherapy; and the search for new agents and means of protection against radiation. Orig. art. has: 1 table and 10 chemical formulas.

ASSOCIATION: None

SUBMITTED: 11Ju164 ENCL: 00 SUB CODE: LS

NO REF SOV: 106 OTHER: 132

Card 3/3

KOSTYANOVSKIY, R.G.; PAN'SHIN, O.A.

New method of synthesizing ethylenimine derivatives. Izv. AN SSSR. Ser. khim. no.8:1554 Ag '64. (MIRA 17:9)

1. Institut khimicheskiy fiziki AN SSSR.

KOSTYANOVSKIY, R.G.; YUZHAKOVA, O.A.

Alkylidene-bis-ethylenimines. Dokl. AN SSSR [illegible] no.1:[illegible]
N '64. (MIRA [illegible])

1. Institut khimicheskoy fiziki AN SSSR. Predstavleno akademikom I.L. Knunyantsem.

KOSTYANOVSKIY, R.G.; PAN'SHIN, O.A.

Cleavage of asymmetrical heminal amines. Izv. AN SSSR. Ser. khim. [illegible]:564-567 '65. (MIRA 18:5)

1. Institut khimicheskoy fiziki AN SSSR.

KOSTYANOVSKIY, R.G.; PAN'SHIN, O.A.

N, N'-methylene- and benzylidenebisethylenimines. Izv. AN SSSR. Ser. khim. no.3:567-570 '65. (MIRA 18:5)

1. Institut khimicheskoy fiziki AN SSSR.

KOSTYANOVSKIY, R.G.; PAN'SHIN, O.A.

N-alkoxymethyl ethylenimines. Izv. AN SSSR. Ser. khim. no.4:740-743 '65. (MIRA 18:5)

1. Institut khimicheskoy fiziki AN SSSR.

KOSTYANOVSKIY, R.G.; YUZHAKOVA, O.A.; BYSTROV, V.F.

Conjugation of ethylenimine nitrogen with an activated double bond. Zhur. VKHO 10 no.2:229-231 '65. (MIRA 18:6)

1. Institut khimicheskoy fiziki AN SSSR.

KOSTYANOVSKIY, R.G.

N-Acryloyl-ethylenimine. Zhur. VKHO 10 no.2:231-233 '65.
(MIRA 18:6)

1. Institut khimicheskoy fiziki AN SSSR.

BRYSTROV, V.F.; KOSTYANOVSKIY, R.G.; PAN'SHIN, O.A.; STEPANYANTS, A.U.; UZHAKOVA, O.A.

Three-membered rings. Part 1. Opt. i spektr. 19 no.2: 217-228 Ag '65. (MIRA 18:8)

KOSTYANOVSKIY, R.G.; PROKOF'YEV, A.K.

Three-membered rings with coordination bonds. Dokl. AN SSSR 164 no.5:1054-1057 O '65. (MIRA 18:10)

1. Institut khimicheskoy fiziki AN SSSR. Submitted July 1, 1965.

KOSTYANOY, G.N.

Measurement of radial flux by a temperature gauge fastened in the center of a thin round plate. Trudy TSAO no.45:61-72 '62.
(MIRA 16:10)

L 18785-63 EWT(1)/BDS AFFTC/ASD/ESD-3 RB

ACCESSION NR: AR3006441 S/0124/63/000/008/B117/B117

SOURCE: RZh. Mekhanika, Abs. 8B778

AUTHOR: Kostyanoy, G. N.

TITLE: Radiation error in the measurement of temperature in the free atmosphere by thermal resistors of type MMT-1, and KMT-1

CITED SOURCE: Tr. Tsentr. aerol. observ., vy*p. 45, 1962, 73-81

TOPIC TAGS: radiation error, temperature measurement, thermal resistor radio sounding, atmospheric measurement, atmospheric temperature

TRANSLATION: The question of radiation errors during the measurement of the temperature of the air by thermoresistances (TRO) which are used in radio sounding of the atmosphere. Formulas are introduced for the calculation of the heating (the difference of temperature of the TR and the surrounding air) for the TR's shielded and unshielded from the sun in the cases when they are oriented horizontally and vertically relative to the surface of the earth. The conditions during which TRs with coverings have the least heating are introduced. Recommendations are made with respect to decreasing the radiation error of the transmitters used for the measurement of the temperature in the free atmosphere. M. S. M.

DATE ACQ: 28Aug63 SUB CODE: AS, PH ENCL: 00

Card 1/1

S/050/63/000/001/005/007
D218/D307

AUTHORS: Kostyanoy, G. N. and Kruglova, A. I.

TITLE: On the reduction of radiation errors in measurements of the temperature of air by the РКЗ-1А (RKZ-1A) radiosonde

PERIODICAL: Meteorologiya i gidrologiya, no. 1, 1963, 47

TEXT: It has been found that the radiation error may be reduced to 2 - 3 degrees at a height of 30 km by using the ММТ-6 (MMT-6) thermistor, instead of the previously employed MMT-1 and by painting it with a white substance consisting mainly of $BaSO_4$. The MMT-6 has a small diameter (by a factor of 2.5), and hence the convective heat transfer coefficient is larger by a factor of 1.5, so that the radiation error is reduced by an approximately equal factor. The white coating has a reflection coefficient of 85 - 90%, and this gives rise to reduction in the radiation error by a factor of 3 to 4. A modification of the holder, aimed at reducing its effect on

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On the reduction of ...

the thermistor, gave rise to a reduction in the radiation error by a factor of 1.2 - 1.5. It is stated that the RKZ-1A radiosonde, incorporating the MMT-6 thermistor, covered with the $BaSO_4$ coating and mounted on the lighter support, is comparable with, or may even be better than, the "better radiosondes employed abroad".

ASSOCIATION: Tsentralnaya aerologicheskaya observatoriya (Central Aerological Observatory)

Card 2/2

EWT(1)/FCC(w)/BDS/ES(v)--AFFTC/ESD-3--Pi-4/Pe-4/Pq-4--GW
L 10775-63
ACCESSION NR: AP3003803 S/0050/63/000/007/0047/0049

AUTHOR: Kostyanoy, G. N.

TITLE: Actinometric radiosonde

SOURCE: Meteorologiya i gidrologiya, no. 7, 1963, 47-49

TOPIC TAGS: meteorological instruments, actinometric radiosonde, radiation balance, balance meter

ABSTRACT: In 1961 an actinometric radiosonde, incorporating the best features of non-Soviet instruments and actinometers, was designed to measure long-wave radiation. The instrument is a slightly modified PK3-1A radiosonde suspended 30 m below a balloon envelope so that the sensing surfaces of the balance meter are horizontal. The balance meter (the flux and balance sensor) is attached to supports and is 70 cm from the radiosonde housing. The sensing surfaces of the meter are not shielded by the housing and the inertia error is small. The balance

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Card 2/2

BELOV, V. P.; GERMAN, A. I.; KOSTYANOV, G. N.; PAKHOMOVA, L. A.

"Balloon and aircraft measurements of short wave radiation."

report presented at the Atmospheric Radiation Symp, Leningrad, 5-12 Aug 64.

L 12022-65 EWT(1)/EWG(v) Pe-5/Pae-2 GW

ACCESSION NR: AP4047802 S/0050/64/000/011/0029/0033

AUTHORS: Kostyanoy, G. N.; Pakhomova, L. A.

TITLE: Actinometric measurements in the atmosphere above the Pacific Ocean

SOURCE: Meteorologiya i gidrologiya, no. 11, 1964, 29-33

TOPIC TAGS: atmospheric radiation, research ship observation

ABSTRACT: The authors consider the results of actinometric measurements in the atmosphere above the Pacific Ocean, made during the seventh expedition of the research ship A. I. Voyeykov in January-March 1962. The data are of night observations between 33° N Lat and 37° S Lat. One set of measurements was made along the 160th meridian, the other between 150 and 170° E Long. The data show that the streams of long-wave radiation and the effective radiation change markedly with latitude. Descending streams of long-wave radiation are at a minimum at the equator, but shift slightly to the north (4° N Lat), and this minimum is most sharply developed at levels of 500 to 200 millibars. Rising currents increase toward the north, and reach maximum at 8-18° N Lat, beyond which they fall to the boundary of the observed range (32° N Lat). The values of rising currents also

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L 12022-65
ACCESSION NR: AP4047802

increase southward from the equatorial region, reaching a maximum at 10-20° S Lat. The values are as large or are larger than the maximums for the northern latitudes (at 500 millibars). The distribution of upward and downward streams of long-wave radiation and the distribution of effective radiation are shown graphically in Figs. 1-3 on the Enclosures. It is seen that the actual field of long-wave radiation differs markedly from the average theoretical value. More data are needed for a clearer definition of the radiation field, especially in the zone within 10° on either side of the equator. The authors express their thanks to V. Ye. Proshin and his group for their great aid in organizing and conducting the actinometric measurements on the research ship." Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory)

SUBMITTED: 11Jun64 ENCL: 03

SUB CODE: ES NO REF SOV: 005 OTHER: 006

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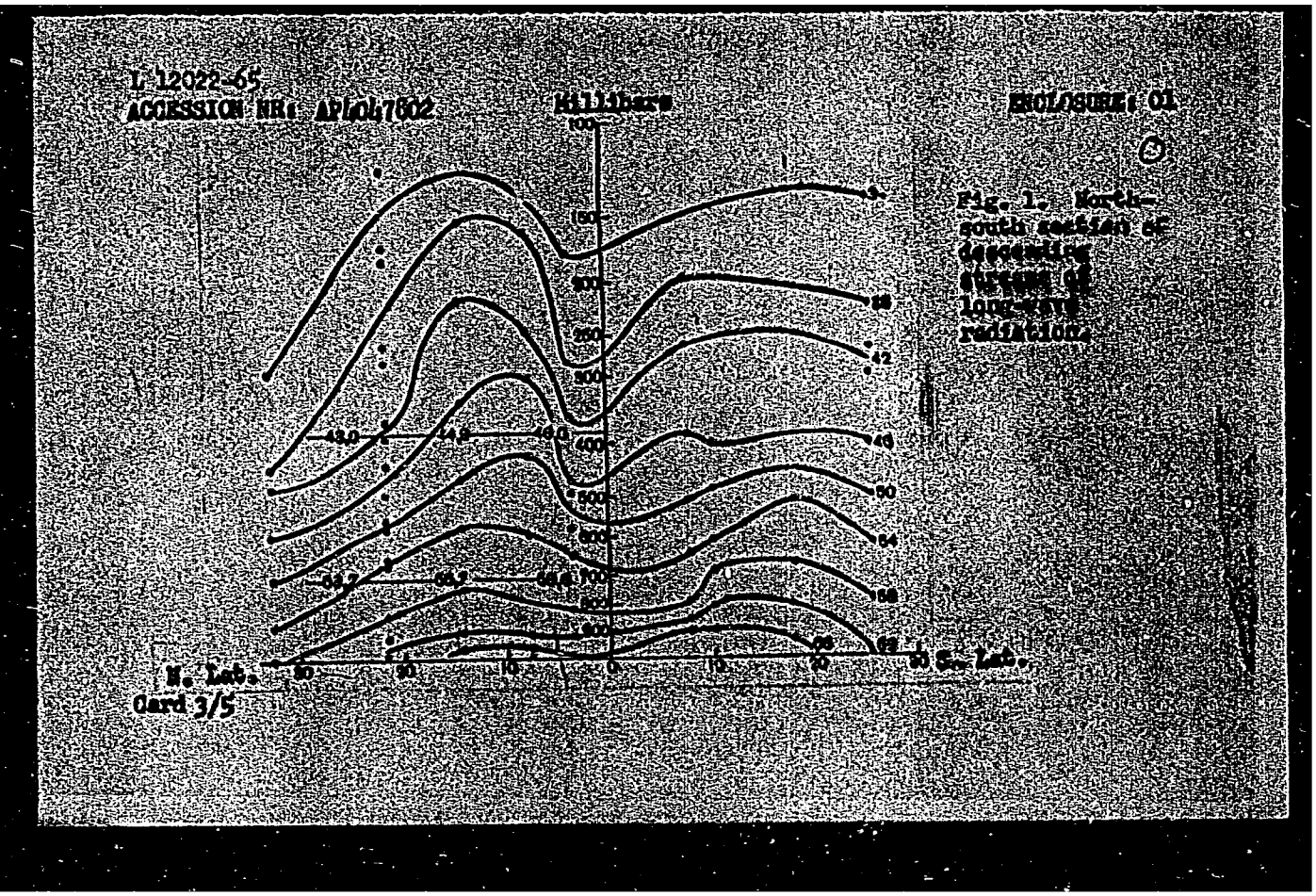

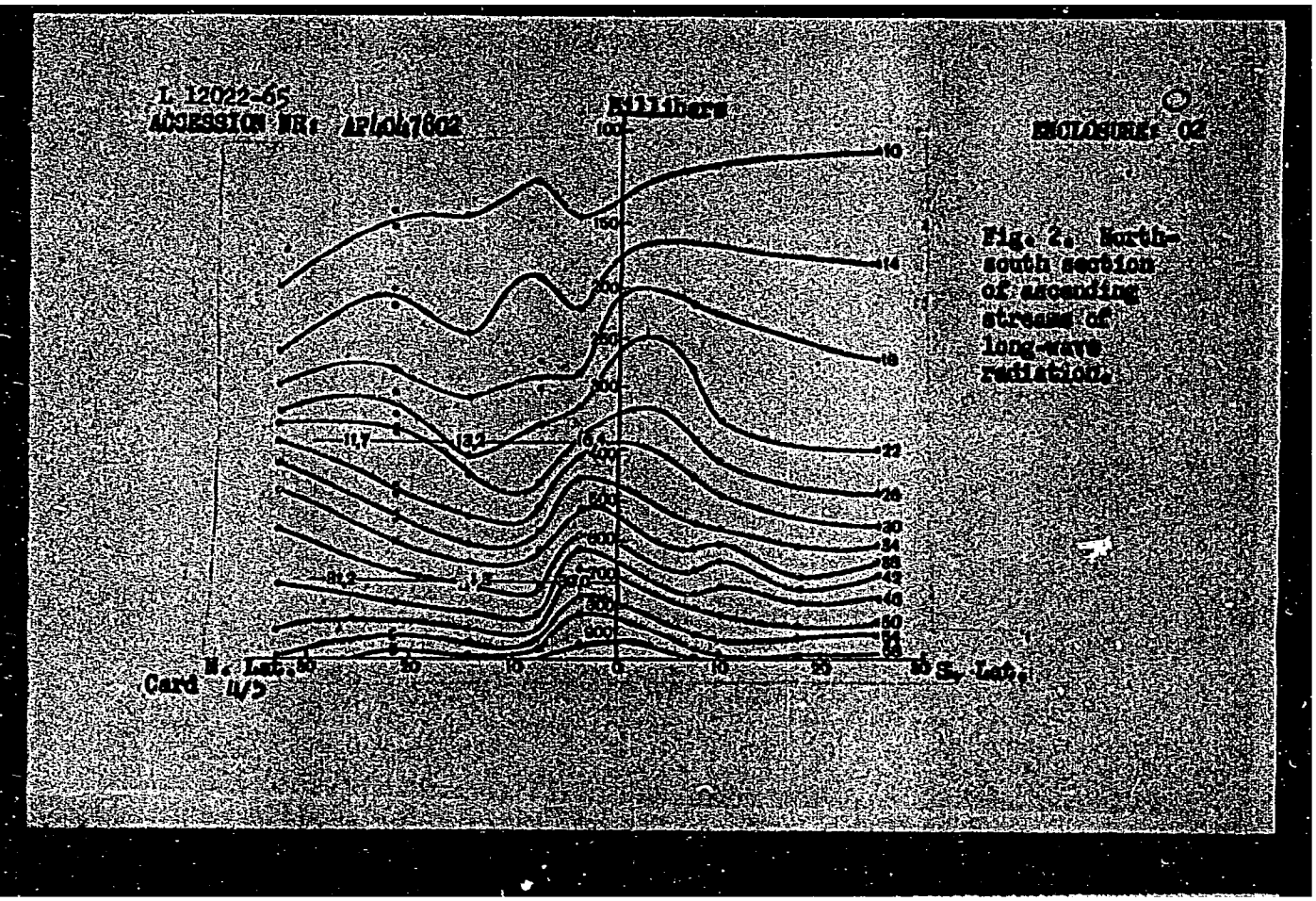

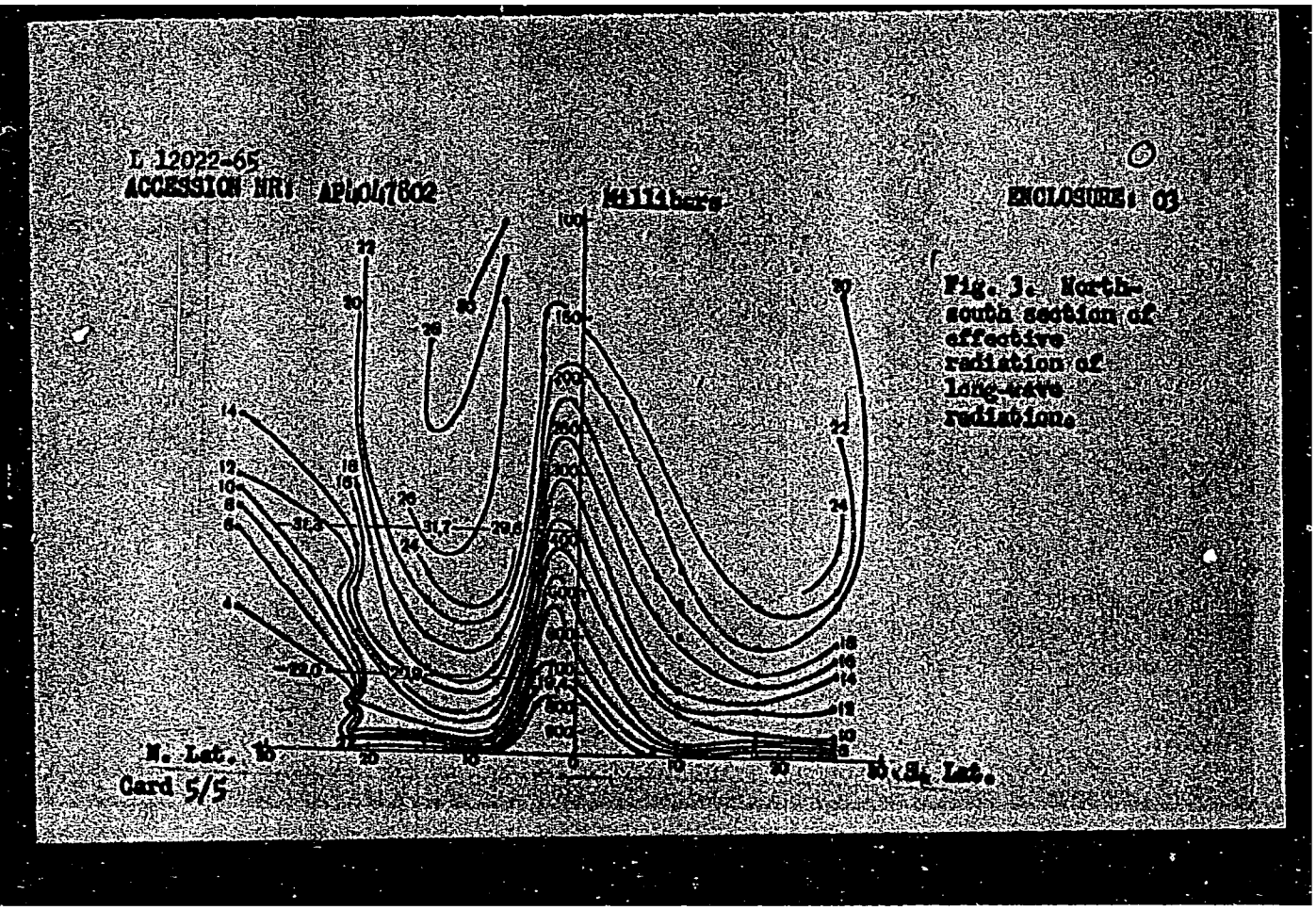

Fig. 3. North-south section of effective radiation of long-wave radiation.

L 8816-65 EWT(1) RAD(a)

ACCESSION NR: AP4043945 S/0103/64/019/008/0022/0024

AUTHOR: Kostyanoy, G. N. (Active member)

TITLE: Superregenerative converter of pulse signals

SOURCE: Radiotekhnika, v. 19, no. 8, 1964, 22-24

TOPIC TAGS: pulse superregenerative reception, superregenerative pulse converter, responder, transceiver

ABSTRACT: A circuit to be used in transceivers and responders is described. It permits reception of short radio pulses (1-10 μsec) and automatic quenching of the generated pulses for intervals of 400-500 μsec following every received pulse. This action is achieved in a miniature command receiver which uses a superregenerative converter of pulse signals. With the duration of the input pulse signal of 600 μsec and longer, the interval between pulses generated by this circuit depends only slightly on the duration of the incoming pulse. With a rate of interrogation and command pulse signals higher than 2000 pulse/sec, the converter operates as a frequency divider, and with 800 to 1000 pulse/sec, forms output pulses with a duty factor equal to 2. The amplification of the converter is several times higher than that obtained by the superregenerative radio receiver because

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L 8816-65
ACCESSION NR: AP4043945

the auxiliary oscillation voltage is used as the converter output signal.
Orig. art. has: 2 figures.

ASSOCIATION: Nauchno tekhnicheskoye obshchestvo radiotekhniki i elektroniki (Scientific and Technological Society of Radio-Technology and Electronics)
SUBMITTED: 22Oct63 ATD PRESS: 3106 ENCL: 00

SUB CODE: EC NO REF SOV: 001 OTHER: 000

Card 2/2

KOSTYANOY, G.N.

Methodology of calculating inertia errors in aerological studies.
Trudy TSAO no.60:54-64 '64. (MIRA 18:5)

L 59507-65 EWG(v)/EWT(l) Pe-5/Pae-2 GW

ACCESSION NR: AP5019153 UR/0362/65/001/007/0715/0721
551.521.32

AUTHOR: Kostyanoy, G. N.

TITLE: Correlation between upwelling fluxes of longwave radiation of the earth and troposphere and the temperature of the layer of mean energy

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 1, no. 7, 1965, 715-721

TOPIC TAGS: upwelling longwave radiation, troposphere, radiation flux, radiation absorption, water vapor, carbon dioxide, ozone correlation coefficient, mean energy layer

ABSTRACT: The problem of the correlation between the upwelling longwave radiation of the earth and the troposphere and the temperature of the atmospheric layers is studied theoretically. A formula is given which expresses the radiation flux as a function of the ground temperature, the temperature distribution in air layers, and the radiation absorption by water vapor, carbon dioxide, and ozone. The correlation coefficient is computed with a nomogram. Great differences in the numerical values of the coefficient point to the nonlinear correlation between the radiation flux and the air temperature. The height, temperature, and pressure of the layer of mean

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L 59507-65

ACCESSION NR: AP5019153

energy were determined from each sounding and from these data, the correlation coefficient between the intensities of the radiation fluxes of the ground and the layer of mean energy. Correlation coefficients computed from sounding data were small except in some cases with a cloudy sky. Thus, the thermal stratification of the atmosphere depends upon many factors, and the influence of the upwelling radiation is slight. The correlation between the upwelling radiation and the temperature of atmospheric layers is vague. Orig. art. has: 5 tables and 5 formulas. [ED]

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory)

SUBMITTED: 30Nov64 ENCL: 00 SUB CODE: ES

NO REF SOV: 019 OTHER: 005 ATD PRESS: 4054

Card 2/2

KOSTYANOY, G.N.

Relation between the upward longwave radiation fluxes from the earth and the troposphere and the temperature of the mean energy level. Izv. AN SSSR. Fiz. atm. i okean. 1 no.7:715-721 Jl '65. (MIRA 18:8)

1. TSentral'naya aerologicheskaya observatoriya.

L 3583-66 EWT(1) GW

ACCESSION NR: AP5021869 UR/0362/65/001/008/0823/0832
551.521.32

AUTHOR: Kostyanoy, G. N.

TITLE: On the change in the large wavelength radiation field in the free atmosphere during the winter period

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 1, no. 8, 1965, 823-832

TOPIC TAGS: meteorology, meteorological phenomenon, atmospheric irradiation, actinometry, meteorological balloon

ABSTRACT: An analysis of the actinometric radiosonde data on the large wavelength radiation field, obtained during the month of January 1963 above the city of Dolgoprudnyy, is presented. The work was undertaken to extend presently available information on the nature of the infrared radiation in the free atmosphere. The data on the air temperature, relative humidity, change in the effective radiation in the troposphere, and on the upward and downward flux of infrared radiation are presented graphically (see Fig. 1 on the Enclosure). Meteorological parameters determined at the time of sounding are tabulated. It is concluded that: 1) the large wavelength radiation field of the free atmosphere during winter conditions

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L 35[illegible]-66

ACCESSION NR: AP5021869

3

is chiefly determined by the thermal stratification and water vapour content of the atmosphere; 2) apparently a connection exists between the synoptic conditions and the water vapour content of the atmosphere. N. T. Batova and Yu. G. Dudanov took part in the actinometric sounding balloon experiments. Orig. art. has: 1 table, 5 graphs, and 1 equation.

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory)

SUBMITTED: 25Dec64 ENCL: 02 SUB CODE: ES

NO REF SOV: 019 OTHER: 008

Card 2/4

L 3583-66

ACCESSION NR: AP5021869

ENCLOSURE: 01

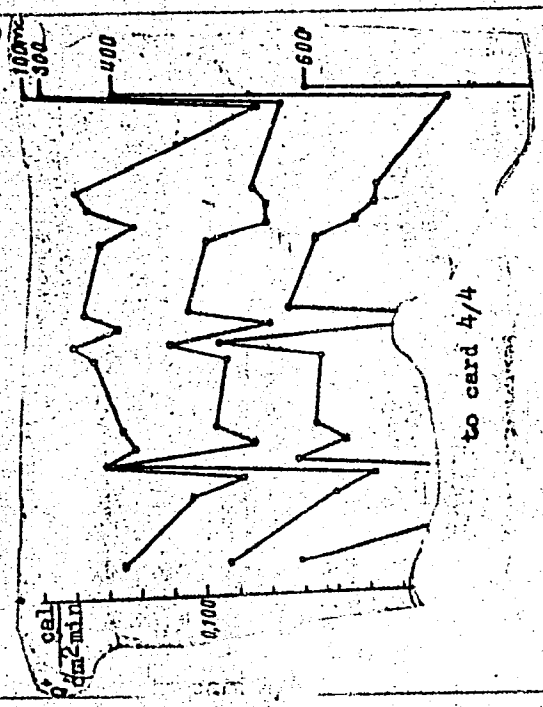

Fig. 1. Field of the downward flux of long wavelength radiation during January 1963

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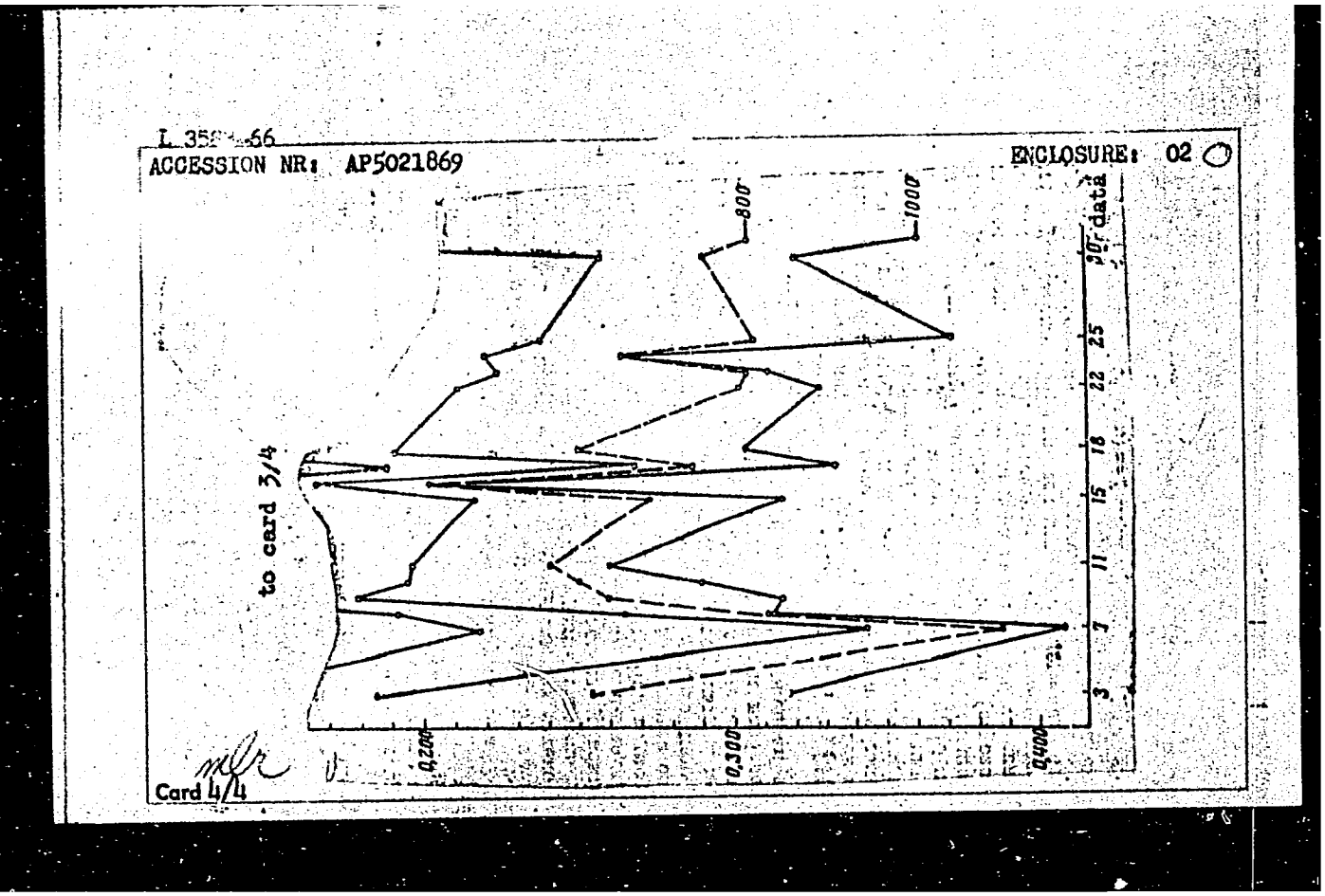

L 2172-66 - EWT(1) GW
ACCESSION NR: AP5022925 UR/0362/65/001/009/0996/1000
551.521.32

46
40
B

AUTHOR: Kostyanoy, G. N.

TITLE: Effect of the reflectivity of the underlying surface on longwave radiation fluxes in the free atmosphere

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 1, no. 9, 1965, 996-1000

TOPIC TAGS: free atmosphere, heat reflection, heat radiation, radiative heat transfer

ABSTRACT: The effect of the reflectivity of the underlying surface is usually neglected in calculations of longwave radiation fluxes in the free atmosphere; however, because of the greater accuracy of experimental studies of the radiation field in the free atmosphere, it has become necessary to evaluate this factor. Two special cases are considered: (1) the surface reflects diffusively in accordance with Lambert's law, and (2) the surface reflects specularly only. For simplicity, it is assumed that the reflectivity in both cases is independent of the direction of propagation of the radiation and of its spectral properties. It

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L 2172-66
ACCESSION NR: AP5022925

6

is found that when the accuracy of the determination of the integral transmission function for diffuse radiation is considered, the effect of the reflectivity of the underlying surface may be neglected in calculations of the integral longwave radiation fluxes in the free atmosphere above 300—500 m. "In conclusion, I thank Ye. M. Feygel'son for helpful suggestions during review of this work." Orig. art. has: 30 formulas.

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory)

SUBMITTED: 24Feb65 ENCL: 00 SUB CODE: ES,TD

NO REF SOV: 004 OTHER: 001

Card 2/2

L 01211-66 EWT(1). GW

ACCESSION NR: AP5023681 UR/0050/65/000/010/0029/0032

551.521

AUTHOR: Kostyanoy, G. N.

TITLE: Correlations of the longwave radiation field with synoptic conditions in the summer

SOURCE: Meteorologiya i gidrologiya, no. 10, 1965, 29-32

TOPIC TAGS: actinometric sounding, upwelling radiation, downwelling radiation, pressure level, temperature stratification, effective radiation, atmospheric layer, troposphere, tropopause, cyclonic activity

ABSTRACT: Observation data obtained during actinometric radiation soundings of the atmosphere at Dolgoprudnyy Station in August 1962 are discussed. The observations were carried out at night at different degrees of cloudiness. The state of upwelling and downwelling radiation is presented graphically in the original article for pressure levels from the ground to the 150-mb level. When the skies are cloudless, the radiation depends upon the distribution of humidity and the stratification of the temperature layers of the atmosphere. The effective radiation in the atmosphere is nearly zero, although upwelling and downwelling radiation show changes.

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L 01211-66

ACCESSION NR: AP5023681

3

The effective radiation in clouds is less than 0.05 cal/cm^2 min. Radiation transfer in the upper atmospheric layers is influenced by clouds. Maximum cooling takes place in those atmospheric layers where a strong change of humidity is observed. The rate of cooling at the upper limit of the clouds reaches 1—2 degrees an hour. Beyond the tropopause, the upwelling radiation has the same value in the dry and cool troposphere and the wet and warm troposphere. The downwelling radiation is also determined by the state of the stratification of temperatures and the distribution of humidity in the upper layers of the atmosphere. The downwelling radiation is less intense during anticyclonic states and most effective during cyclonic activity. Orig. art. has: 3 figures and 1 table. [EG]

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory)

44,55

SUBMITTED: 12Jan65 ENCL: 00 SUB CODE: ES

NO REF SOV: 007 OTHER: 002 ATD PRESS: 4091

Card 2/2

KOSTYANOY, G.N.; PAKHOMOVA, L.A.

Measurement of the coefficient of brightness of the underlying surface and clouds from an airplane. Trudy TSAO no.66:63-72 '65. (MIRA 19:1)

KOSTYANOY, G.N.

Making some parameters of humidity more exact. Trudy TSAO no.67:3-16 '65. (MIRA 19:1)

L 10082-67 EWT(1) GW
ACC NR: AT6027559 SOURCE CODE: UR/0362/66/002/005/0501/0507

AUTHOR: Kostyanoy, G. N.

ORIG: Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya)

TITLE: Connection between the radiation temperature of an opaque body and the radiative change in temperature of the medium

SOURCE: AN SSSR, Izvestiya. Fizika atomsfery i okeana, v. 2, no. 5, 1966, 501-507

TOPIC TAGS: solar radiation absorption, thermal absorption, transport equation, optic property, light absorption, atmospheric radiation, atmospheric temperature

ABSTRACT: In view of the use of opaque absorbing bodies for the measurement of radiation, the authors consider the connection between the temperature of a medium and the radiation temperature of a body for which the total incident energy goes only into absorption and reflection, and determine the connection between the temperature of the body and the change in temperature of the medium in which this body is located. The radiation temperature is defined as the temperature rise of

Card 1/2 UDC: 551.52

a body above its ambient under the influence of radiation from the ambient. By solving the long-wave transport equations, the author obtains the fraction of the incident radiation absorbed by the body which then equated to the equilibrium value of the energy lost by radiation. The conditions under which two opaque bodies placed in the same medium will have the same radiation temperature are found to be that their optical properties be similar and that the bodies have similar shape. In the case of a spherical body, only similarity of the absorption coefficients is required. It is shown that in order for the opaque body to have the same radiation temperature at any point of the medium, three conditions must be satisfied: a) the optical properties of the medium must not vary from point to point, b) the optical properties of the body should vary in accordance with the optical properties of the medium, c) the body and the medium should be gray. Conditions a) and c) do not hold for the earth's atmosphere, and condition b) cannot be satisfied for obvious reason. It is thus demonstrated that the rate of change of temperature of air cannot be determined from the difference between the temperature of an opaque body placed in the air and the air. It is pointed out on this basis that the deductions presented by J. P. Funk (J. Opt. Soc. America v. 50, no. 10, 1960) and G. N. Plass (J. Meteorol. v. 15, no. 6, 1958) are incorrect. Orig. art. has: 35 formulas.

SUB: CODE: 04, 20/ SUBM DATE: 09Aug65/ ORIG REF: 001/ OTH REF: 006

ACC NR: AT7000567 SOURCE CODE: UR/2789/66/000/070/0031/0040

AUTHORS: Kostyanoy, G. N.; Kurilova, Yu. V.

ORG: none

TITLE: On the radiation properties of cloudiness

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 70, 1966. Radiatsionno-opticheskiye i ozonometricheskiye issledovaniya atmosfery (Radiation-optical and ozonometric investigations of the atmosphere), 31-40

TOPIC TAGS: atmospheric cloud, atmospheric radiation, radiosonde, atmospheric humidity

ABSTRACT: The effect of cloudiness on the long wave radiation field of the atmosphere is analyzed on the basis of 30 actinometric radiosonde climbs during the winter season. Half of these observations correspond to the lower cloud layers: St, Sc, Sc op, Sc trans. The remainder correspond to the cloudiness of frontal systems As--Ns, Frnb. Altitude versus temperature, specific humidity, and upward ($Q^{\uparrow}$) and downward ($Q^{\downarrow}$) draft curves are given. A table is prepared showing the distribution of the effective radiation magnitude F in the cloud as a function of stratification temperature (γ). These experimental results agree well with theoretical predictions. A second table shows the presence of air-temperature stratification in the field of radiation change. Strong correlations are found between the height of cloud radiation boundary and the

Card 1/2 UDC: 551.521.14

ACC NR: AT7000567

altitudes determined by the upward-downward draft ratios $\frac{\gamma_Q^{\uparrow}}{\gamma_Q^{\downarrow}}$, by the altitudes of discontinuity in the profiles of specific humidity q, and the inversion altitude. From this it is concluded that the cloud boundaries can be determined by radiation fields and that the radiation characteristics of the clouds are related to their water content. Orig. art. has: 5 tables and 2 figures.

SUB CODE: 04/ SUBM DATE: 04Feb65/ ORIG REF: 017/ OTH REF: 003

Card 2/2

ACC NR: AT7000568 SOURCE CODE: UR/2789/66/000/070/0041/0057

AUTHORS: Zaytseva, N. A.; Kostyanoy, G. N.

ORG: none

TITLE: Change of the long wave radiation field in the free atmosphere during 7--10 hrs

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 70, 1966. Radiatsionno-opticheskiye i ozonometricheskiye issledovaniya atmosfery (Radiation-optical and ozonometric investigations of the atmosphere), 41-57

TOPIC TAGS: radiosonde, actinometry, atmospheric sounding, atmospheric cloud, atmospheric radiation

ABSTRACT: Changes in the long wave radiation of the earth's atmosphere during a 7--10 hr period are discussed on the basis of actinometric radiosonde data obtained over a series of seven observations at the TsAO Aerological Institute in Dolgoprudyy. The seven radiosonde series are divided into three general groups. The first recorded radiation field changes under cloudless conditions. The second was done under solid cloud cover. The third recorded changes in the radiation field when atmospheric conditions were changing rapidly during the observation. A number of time-plots are given showing the changes in the effective radiation field in the air up to an altitude of 20 km. From these results it is concluded that changes in the long wave

UDC: 551.552.32

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ACC NR: AT7000568

radiation of ascending currents during clear nights and overcast days in the winter do not exceed ± 5--7%. In the troposphere, changes in the downward current do not exceed 10--15%. Furthermore, the effective radiation in the stratosphere changes within the limits of 20--30%. Finally, changes in humidity affect the radiation field in the stratosphere very strongly. Orig. art. has: 6 figures.

SUB CODE: 04/ SUBM DATE: 04Feb65/ ORIG REF: 001

Card 2/2

ACC NR: AP7001882 (N) SOURCE CODE: UR/0362/66/002/012/1235/1252

AUTHORS: Zaytseva, N. A.; Kostyanoy, G. N.

ORG: Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya)

TITLE: Meridional change in the long-wave field of radiation in the atmosphere above the Pacific Ocean (from weather-ship data)

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 12, 1966, 1235-1252

TOPIC TAGS: heat radiation, research ship, atmospheric radiation

ABSTRACT: The authors have analyzed meridional cross sections of the long-wave radiation field, using data of radiometric soundings from the weather ships A. I. Voyeykov and Yu. M. Shokal'skiy during May and June 1965. Some aspects of the distribution of radiation currents in the free atmosphere above the Pacific Ocean are discussed. The data are tabulated and the distributions are represented in figures. These show that the meridional course of effective radiation here observed is in good agreement with previous determinations, except for a maximum near 2° S lat. at a height of 10 km. It is noted that there is a great difference in heat influx in the troposphere at latitudes 15--25° N from that at the equator: 0.175 versus 0.100 cal/cm^2 min. This causes radiation cooling of the troposphere of 1.1 and 0.6° per day, respectively. The sharpest changes in actinometric and aerological parameters

Card 1/2 UDC: 551.521.2

ACC NR: AP7001882

in the free atmosphere occur between 15° N and 15° S latitudes, and this zone needs special study, all round the world, on other oceans and on land. Orig. art. has: 5 figures and 9 tables.

SUB CODE: 04/ SUBM DATE: 07Apr66/ ORIG REF: 011/ OTH REF: 008

Card 2/2

L 14023-66 EWT(1)/FCC GW

ACC NR: AT6005153 SOURCE CODE: UR/2789/65/000/066/0063/0072

AUTHOR: Kostyanoy, I. N.; Pakhomova, L. A. 21 B+1

ORG: Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya)

TITLE: Measurements of the brightness coefficient[12,44,55] of the ground and clouds from an airplane

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 66, 1965. Aerosinopticheskiye i aerologicheskiye issledovaniya (Aerosynoptic and aerological research), 63-72

TOPIC TAGS: reflected light, incident light, albedo, Lambert law, brightness coefficient, downwelling radiation

ABSTRACT: The reflection ability of a surface is usually characterized by the albedo which is a ratio of the incident light to the light reflected in all directions. The brightness coefficient can be used instead of the albedo. The former is a ratio of the surface brightness to the brightness of an absolutely white surface determined by Lambert's law. The brightness coefficient differs from the albedo, being equal to it only when a Lambert's surface is used. The brightness coefficient for various natural surfaces was determined from aerological and actinometric observation data obtained by airplane flights to a height of 6 km. The downwelling radiation was measured by Yanishevskiy's pyranometer located on the airplane, and the reflected ra-

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L 14023-66

ACC NR: AT6005153

diation was measured by a special instrument fastened beneath the airplane. The reflected radiation was measured in absolute units. Flights took place above different ground and cloud areas. Brightness coefficients computed from observation data obtained from the ground and from reservoirs in the Crimean, Don, and Volgograd steppes and in the Caspian Sea region were compiled in seven tables presented in the original article. Coefficients computed from data obtained above water surfaces were represented graphically. The greatest brightness coefficient was found above regions of yellow sand and harvested crops on fields. Orig. art. has: 9 tables, 4 figures, and 3 formulas. [EC]

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 001/ ATD PRESS: 4196

Card 2/2

KOSTYANOY, M.G.

[Engineering geology characteristics of the argillaceous rocks of the Kanev region dislocations] Inzhenerno-geologicheskie osobennosti glinistykh porod rajona Kanevskikh dislokatsii. Kiev, Izd-vo Akad. nauk USSR., 1963. 174 p. (MIRA 18:10)

KOSTYANOY, Mikhail Grigor'yevich; BABINETS, A.Ye., doktor geol.-mineral.nauk, otv.red.; LYAL'KO, V.I., red.izd-va; BEREZOVSKAYA, D.N., tekhn.red.

[Characteristics of clay rocks in the regions of the Kanev dislocations from the viewpoint of engineering geology] Inzhenerno-geologicheskie osobennosti glinistykh porod raiona Kanevskikh dislokatsii. Kiev, Izd-vo Akad. nauk USSR, 1963. 173 p. (Akademiia nauk URSR. Kiev. Instytut geologichnykh nauk. [Trudy]. Seriia gidrogeologii i inzhenernoi geologii, no.10). (MIRA 16:10)

KOSTYANOY, M.G. [Kostianoi, M.H.]

Mesozoic and Cenozoic water-clay relationship of the Kanev dislocation belt from the point of view of engineering geology. Trudy Inst.geol.-nauk AN URSR Ser.gidrogeol.i inzh.geol. no.8:52-83 '62. (MIRA 15:7)
(Ukraine--Engineering geology) (Ukraine--Clay)

ACC NR: AP6032085 (A) SOURCE CODE: UR/0317/66/000/009/0048/0053

AUTHOR: Baranyuk, V. (Brigadier general; Tank forces); Kostyanoy, N. (Engineer; Colonel; Hero of Soviet Union)

ORG: None

TITLE: Tanks in mountains

SOURCE: Tekhnika i vooruzheniye, no. 9, 1966, 48-53

TOPIC TAGS: military tank, ground force training

ABSTRACT: A general review of the use of military tanks in mountains is presented on the basis of practical experience and training exercises. The high standard of proficiency attained and maintained by a tank unit (commanded by Lieutenant-Colonel M. Yelizarov) is praised and the names of many of its officers and sergeants are mentioned. The effect of low atmospheric pressure, at high altitudes, on the performance of tank engines is examined. An 8-pct decrease in power of a diesel engine per one kilometer of altitude is mentioned. The increase in fuel consumption at high altitudes is also considered. In general, manipulations with fuel injection and with crankshaft revolutions are not recommended. Due to a more intensive evaporation of water at high altitudes, a stricter control over the water levels in cooling systems and storage batteries is recommended. Careful operation and maintenance of drives and brakes are main subjects of training programs.

Card 1/2

ACC NR: AP6052085

The wear of caterpillar tracks, caused by stones and vibrations, is also discussed and the application of higher maintenance standards are suggested. In conclusion, it is mentioned that the military personnel must undergo special psychological training in order to acquire habits and reactions for operations in high mountains under abnormal conditions. Orig. art. has: 5 photos, 1 table.

SUB CODE: 15/ SUBM DATE: None

KOSTYANOY, N.G. [Kostianoi, M.H.]

Effect of connate water on the determination of the specific gravity and some physicomechanical indices of the properties of clay rocks. (MIRA 14:7)
Geol.zhur. 21 no.3:65-71 '61.

1. Institut geologicheskikh nauk AN USSR.
(Clay)

KOSTYANOY, M.G. [Kostianoi, M.H.]; LYAL'KO, V.I.

Evaluation of the possibilities of the movement of moisture in the aeration zone of the Dnieper-Molochnaya interfluve on the basis of studying the content of connate water. Geol.zhur. 22 no.5:61-66 '62. (MIRA 15:12)

1. Institut geologicheskikh nauk AN UkrSSR.
(Dnieper Valley--Water, Underground)
(Molochnaya Valley--Water, Underground)

I. 44402-66 EWT(d)/EWT(m)/EWP(h)

ACC NR: AN6012199 (A,N) SOURCE CODE: UR/9008/65/000/307/0002/0002

AUTHOR: Baranyuk, V. (Major general of tank forces, Hero of the Soviet Union); Kostyanoy, N. (Engineer, Colonel)

ORG: none

19

TITLE: Technology is demanding [Better technical training needed for army officers]

B

SOURCE: Krasnaya zvezda, 30 Dec 65, p. 2, col. 1-4

TOPIC TAGS: military personnel, military training

ABSTRACT: The author stresses the need to improve technical training of army officer personnel and illustrates it with examples. He adds that lack of time, which forces men to acquire a purely superficial knowledge of equipment, and the inefficiency of the present system of technical training are to blame for this. Regular technical training courses should be organized for officers. The author also states that methodical training of specialist technicians is likewise poorly organized in many units. As a rule, there are no specialized seminars and lectures for directors

Card 1/2

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of technical training and available training movies are not used. The author believes that award of certificates to officers who have completed technical courses would serve as incentive to such studies. Refusal by some officers to use older, although not obsolete equipment, is also an obstacle to improvement in technical training. He blames the central press for the shortage of urgently needed topical and methodological publications and states in conclusion that any combined arms commander can and should become a good technician. [GC]

SUB CODE: 05, 15/ SUBM DATE: none/

Card 2/2

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